

ascertaining the requisite degree, and that one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

In the same paragraph, the Examiner also indicates that the term "capable" in claims 1 and 19 is a relative term, which renders those claims indefinite. The Examiner believes that the term "capable" is not defined by claims 1 and 19, and that the specification does not provide a standard for ascertaining the requisite degree, and that one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

In response to the previous arguments of the applicants, the Examiner states that the term "capable" is indefinite for failing to distinctly define the present invention. More specifically, the Examiner states that the cited term is indefinite because "it can be interpreted as a possibility of bonding the edges of the planks with the solvent wherein there is no definiteness of the bonding of the edges of the planks with the solvent stating that it may or may not bond together." The Examiner also states that the term "laminated" is indefinite for failing to distinctly define the present invention, and notes that the identified term has the broad definition of uniting several layers together. For the following reasons, this rejection is respectfully traversed.

The term "capable" is a term that is in common usage, appears in granted U.S. patents, and would be immediately known to a person skilled in the art. Further, examples of such solvents are provided in the application, and thus one skilled in the art would clearly understand the scope of this claim.

Additionally, it is interesting to note that the Examiner's description of Brown (cited in a reference in this case) at page 3 of the Office Action, uses the term "capable" to describe bonding of edges of a plank, and that the Examiner is able to understand the meaning of the term "capable"

enough to apply the reference.

The word "laminate" is a common term that is frequently used in the flooring industry. Thus, the meaning of this term would be completely clear to persons of ordinary skill in the art of surface coverings and related applications. The concept that a polymeric plank may have a core and another layer laminated to the surface of the core is straightforward. Moreover, the details of the construction of such a plank are set forth at page 4, lines 17-29, as well as in the patent applications incorporated by reference in the cited text. These citations provide even further examples of laminates, particularly to a person of ordinary skill in the art of surface coverings and flooring applications.

Additionally, the Examiner fails to point out how even application of the simple definition set forth in the Office Action would render the claims indefinite, particularly in light of the numerous details in the specification, and in the documents incorporated by reference. Accordingly, the rejection of the terms "capable" and "laminate" under 35 U.S.C. §112 should be withdrawn.

At page 2 of the Office Action, the Examiner rejects claims 1-6 under 35 U.S.C. §102(b) as being unpatentable over Peralt Anstalt (GB 1,178,565). The Examiner states that Peralt Anstalt shows a surface covering comprising two or more polymeric planks having edges, wherein the planks are connected to each other by a bonding agent, wherein the bonding agent is present on at least one of the edges, of at least one of the planks, and wherein the bonding agent is composed of at least one solvent capable of at least bonding the edges of the planks, as shown at column 1, lines 17-22. The Examiner also notes that Peralt Anstalt shows that the bonding agent consists of tetrahydrofuran (THF), as shown in column 1, lines 30-31. The Examiner also

states that Peralt Anstalt shows the surface covering, wherein the bonding agent is various identified organic solvents as stated at column 1, lines 30-31. Finally, the Examiner states that Peralt Anstalt shows that the bonding agent is present on at least each edge of each thermoplastic plank connected together to another thermoplastic plank, and that Peralt Anstalt shows that the bonding agent is present on two opposite edges of each plank, as shown at column 1, lines 17-22.

Moreover, in response to the applicant's previous arguments, the Examiner emphasizes three main points. First, the Examiner states that Peralt Anstalt does show an edge-to-edge bond, regardless if it "overlaps." Additionally, the Examiner states that Peralt Anstalt does show a direct edge-to-edge bond, wherein the edge of one surface is adjacent the edge of the other surface at column 2, lines 75-84.

Second, the Examiner states that although the applicants were not able to locate many of the welding agents set forth in the Office Action in the cited reference, only one compound was necessary to meet the claimed bonding range.

Third, the Examiner states that although the term "two opposite edges" does not appear in the passage cited by the Examiner, and although the identified passage [of the reference] specifically contains the phrase "overlapping edges," the Examiner interprets the term "overlapping edges" as two opposite edges meeting together, regardless of overlapping configuration. The Examiner concludes that overlapping edges are two opposite edges uniting together, which meets the limitation of the claims as to "two opposite edges." For the following reasons, this rejection is respectfully traversed.

Peralt Anstalt shows a different product that is joined together in a completely different manner. As stated earlier, Peralt Anstalt is directed to the sorts of exterior panels that are used in

roofing applications, and the term “overlapping” appears in the text (page 1, lines 16-19) and in the claims. Such a configuration would be typified by the overlapping of shingles on a roof, or clapboard on a house, and this configuration is confirmed by reference to the Figures. Such an overlapping configuration would be essential to ensure a watertight seal in outdoor applications, such as the roofs mentioned in the specification.

By contrast, in the claimed invention, the planks are designed preferably for floors, walls, countertops, etc. In such applications, the joining would be edge-to-edge, with no overlap of any kind, to produce a flat surface. The present wording of the claims does not show the overlapping configuration found in Peralt Anstalt. In fact, the claims specifically mention the bonding agent being applied to the “edges” of the planks, as in claim 1.

The Examiner is misreading the plain meaning of language and of the diagrams. Several parts of the reference make it clear that the bonding of Peralt Anstalt is overlapping, rather than edge-to-edge. In particular, the text identified by the Examiner does not support the stated conclusion, since it does show the nature of the bonding, but is instead largely directed to “an apparatus for joining together plastic sheets.”

Additionally, the Examiner quotes a large number of potential welding agents in the Office Action, and, as support, cites column 1, lines 30-31. The Examiner is correct in indicating that the presence of only a single welding agent in common between the reference and claimed invention is sufficient to support a rejection. However, the one agent in Peralt Anstalt is still not used in edge-to-edge joining. It appears that the Examiner acknowledges that the wide variety of compounds listed previously in the first Office Action do not appear in the cited reference.

As for the Examiner’s remarks about the application of the bonding agent to “two opposite

edges” of each plank, this term does not appear in the passage cited by the Examiner (column 1, lines 17-22). To the contrary, the identified passage specifically refers to “overlapping edges.” Therefore, as noted before, the final configuration of the planks in Peralt Anstalt is clearly overlapping, not edge-to-edge, as would be found in the present invention. Therefore, it is the top and bottom surfaces, not the edges, which actually receive the bonding agent in Peralt Anstalt.

Again, the Examiner is misinterpreting the plain language of the reference. The “edges” that the Examiner speaks of being overlapping are not really the edges at all; they are portions of the top and bottom faces of the panels. The cited reference does not show panels being connected together in any configuration except by an overlapping configuration, which is different from the claimed invention. In the claimed invention, the welding agent is applied to the edges of the planks, not to their top or bottom faces, so as to avoid producing an overlapping structure. From the above, it is clear that Peralt Anstalt does not show the claimed invention. Accordingly, for the reasons set forth above, the rejection under 35 U.S.C. §102 over Peralt Anstalt should be withdrawn.

At page 2 of the Office Action, the Examiner rejects claims 19-20 under 35 U.S.C. §103(a) as being unpatentable over Peralt Anstalt in view of Del Rincon et al. (U.S. Patent No. 5,694,730). The Examiner states that Peralt Anstalt shows a surface covering as previously described. However, Peralt Anstalt does not show splines located between at least a portion of the polymeric planks, wherein at least a portion of the planks and splines are connected to each other by a bonding agent composed of at least one solvent capable of bonding at least the spline and plank together, wherein the bonding agent is applied to at least one of the edges of at least one of the individual planks, splines, or both. The Examiner also states that Del Rincon et al. teaches splines located between at least a portion of the polymeric planks for the purpose of

joining the planks together, as shown at column 1, line 5.

Therefore, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have provided Peralt Anstalt with a spline, located between at least a portion of the polymeric planks, in order to join them together as taught by Del Rincon et al. Additionally, in response to the applicants' previous arguments, the Examiner emphasized two main points.

First, in reply to previous arguments that Del Rincon et al. does not relate to the same material as the claimed invention (making it impossible to use organic solvents such as THF to bond the planks together), the Examiner notes that Del Rincon et al. teaches a polymeric spline that could be combined with Peralt Anstalt's polymeric planks to join the planks together.

Second, in reply to the argument that it would be physically impossible to combine the teachings of the two references, the Examiner states that Peralt Anstalt shows that the sheets are joined together, wherein the edge of one surface is adjacent to the edge of another surface, as set forth at column 2, lines 78-85, and therefore it is possible to physically combine the teachings of the two references. For the following reasons, this rejection is respectfully traversed.

Del Rincon et al. does not relate to the same sort of material as the claimed invention. The claimed invention concerns methods of joining polymeric planks. By contrast, Del Rincon et al. describes wooden planks, as noted in the abstract. Wood is not plastic, and no combination involving Del Rincon et al. could generate the claimed invention.

Moreover, it is difficult, if not impossible, to see how organic solvents, such as THF, that would clearly bond polymeric materials together, could be used to achieve a similar result with wooden planks. Wood is simply not soluble in organic solvents in the same manner as a polymeric

compound. Therefore, it does not seem that wooden planks could be "welded" together, or to a polymeric plank, using the solvent shown in Peralt Anstalt.

With respect to the Examiner's argument that Del Rincon et al. teaches a polymeric spline that could be combined with Peralt Anstalt's polymeric planks, references must be evaluated as a whole, and attempts to arbitrarily choose certain elements of the reference (for instance, the splines) generally constitute an impermissible use of hindsight. Additionally, there is no mention in Del Rincon et al. of using any sort of welding agent. In other word, the splines hold the boards together by mechanical or frictional forces. Therefore, a person skilled in the art would have no reason to use a completely different technique, i.e., solvent welding, which is used in the present invention, since an acceptable solution is already present without solvent welding. Additionally, the splines in Del Rincon et al. are provided with a number of holes so as to drain water, as can be seen by reference to item 32 in Figure 3. Therefore, water would clearly drain through panels connected using the Del Rincon et al. technology. By contrast, one of the preferred points of the present invention is to weld together two planks so as to produce a watertight or water resistant seal, as is generally described at page 2, lines 14-15 and at page 12, lines 12-15. Therefore, it is doubtful whether a person of ordinary skill in the art would be motivated to apply the teachings of Del Rincon et al. to another technology. Additionally, the splines of Del Rincon et al. would not produce the same sort of welded watertight joint that is a principal feature of the claimed invention and an advance over conventional technology.

Additionally, it does not seem physically possible to combine the teachings of the two references. Peralt Anstalt concerns overlapping plastic panels, i.e., panels that are joined together in the manner of shingles. By contrast, Del Rincon et al. concerns wooden boards that are joined

edge-to-edge, using a spline. The applicants cannot see how one could physically place a spline between two panels that are not joined edge-to-edge, and Peralt Anstalt clearly relates to a configuration in which the panels are joined in an overlapping manner. Therefore, the geometrical and spatial requirements of the two references are not physically combinable, and therefore it would not be possible to generate the claimed invention from the teachings of these two references.

With respect to the Examiner's argument that Peralt Anstalt shows that the sheets are joined together, the cited text does not support the Examiner's conclusion. Peralt Anstalt clearly shows overlapping planks, not edge-to-edge joining, as has been discussed before. For instance, the paragraph immediately preceding the language cited by the Examiner (page 1, lines 63-74) confirms that an overlapping configuration is present ("one sheet is in an overlapping spaced relationship with an edge of another sheet"). Additionally, the text identified by the Examiner does not describe the configuration of the joints; instead, the text is largely directed to "an apparatus for joining together plastic sheets." Therefore, it is not possible to physically combine the teachings of the two references. Accordingly, the rejection under 35 U.S.C. §103 over Peralt Anstalt in view of Del Rincon et al. should be withdrawn.

At page 2 of the Office Action, the Examiner rejects claims 22, 23, and 27 under 35 U.S.C. §103(a) as being unpatentable over Peralt Anstalt in view of Boultinghouse (U.S. Patent No. 4,666,549). The Examiner notes that Peralt Anstalt shows a surface covering as previously described, and that Peralt Anstalt shows that the polymeric plank has a polymeric core with a laminate affixed on the surface of the core. The Examiner admits that Peralt Anstalt does not show that the polymeric plank is in the shape of a tile. Additionally, Peralt Anstalt does not show that the bonding agent is composed of at least two different solvents capable of at least

bonding the edges of the polymeric portion of the plank. However, in the Examiner's view, Boultinghouse teaches that the bonding agent shows at least two different solvents capable of at least bonding the edges of the polymeric portion of the plank, for the purposes of providing a permanently welded resinous block copolymer, as shown at column 1, line 34 of that reference.

Therefore, the Examiner concludes that it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have provided Peralt Anstalt with a bonding agent comprising at least two different solvents capable of at least bonding the edges of the polymeric portion of the plank, for the purposes of providing a permanently welded resinous block copolymer, as taught by Boultinghouse.

Additionally, the Examiner states that it would have been an obvious matter of design choice to make the plank in the shape of a tile, since such a modification would have involved a mere change in the shape of the component. The Examiner states that a change in shape is generally recognized as being within the level of ordinary skill in the art. Moreover, in response to the applicants' previous arguments, the Examiner emphasizes three main points.

The Examiner states that Peralt Anstalt shows a polymeric plank that is made of two sheets that are combined into a two film laminate, wherein one of the laminates can be defined as the polymeric core and the other portion can be said to be fixed to the surface of the core.

The Examiner also states that Boultinghouse et al. shows a welding composition containing "at least one hydroxyl-ether and/or keto-ether," and, in addition, a viscosity improving amount of a polymer that is compatible with the polymer material to be welded, as set forth at column 3, lines 16-29.

Moreover, the Examiner states that the intent of the rejection was not combine the two

welding solvents, but rather to replace the welding solvent of Peralt Anstalt with the welding composition of Boultinghouse. For the following reasons, this rejection is respectfully traversed.

The text cited by the Examiner from Peralt Anstalt (column 1, line 12) does not refer to a polymeric core with a laminate affixed to the surface of the core. The cited text merely refers to sheets of "plastics material." Likewise, the Examiner has not identified any portions of Boultinghouse that refer to a polymeric core with a laminate affixed to the surface of the core.

With respect to the Examiner's argument that Peralt Anstalt shows a polymeric plank that is made of two sheets that are combined into a two film laminate, the two sheets laminated together simply do not form a polymeric plank with a core, as in the claimed invention. Additionally, the idea that a "core" could be merely one side of a two-sided laminate is an attempt to stretch language beyond its normal meaning in order to generate a rejection. The specific meaning of a polymeric plank with a core is set forth in the application at page 4, lines 17-29, and it is substantially more complex than merely two sheets laminated together. Therefore, no combination of Peralt Anstalt and Boultinghouse could generate the subject matter of claim 23, which refers to a polymeric plank having a polymeric core with a laminate affixed to the surface of the core.

Additionally, the text cited by the Examiner from Boultinghouse (column 1, line 34) does not show the presence of "at least two different solvents." The applicants have not been able to locate the cited language at the identified portion of the patent. There is text in Boultinghouse that refers to "at least one hydroxyl-ether and/or keto-ether" (column 1, lines 45-50) or "at least one keto-ether and/or hydroxyl-ether solvent" (column 3, lines 16-18). While the use of the phrase "at least one" might infer that more than one solvent can be used, the reference does not show the specific support for a mixture of two solvents that the Examiner alleges. In fact, there is no

suggestion in Boultinghouse that mixtures of solvents are desirable or yield improved properties at all.

With respect to the Examiner's argument that Boultinghouse shows a welding composition and a viscosity improving amount of polymer, the passage cited by the Examiner is unclear. The Examiner's point may be that the use of the indefinite conjunction "and/or" means that the identified phrase, "at least one hydroxyl-ether and/or keto-ether" should be interpreted as showing two solvents, i.e., a hydroxyl-ether and a keto-ether, thus meeting the requirement of the claims ("at least two different solvents"). Moreover, the passage cited by the Examiner (column 3, lines 16-29) also specifically refers to a polymer that is added to improve the viscosity of the welding solution. The Examiner does not explain why this feature is important or how it relates to the number of solvents present. The purpose of the added polymer is to prevent the welding solution from running "off the surface to be welded" (column 3, lines 18-20), so the polymer is merely an additive meant to thicken the real solvent, not a second solvent. Accordingly, Boultinghouse does not teach or suggest the claimed invention. Therefore, the combination suggested by the Examiner does not teach or suggest the use of "at least two different solvents," as required by claim 28.

Moreover, Boultinghouse pertains to the specific case when one desires to bind resinous block copolymers containing anti-block agents, such as a microcrystalline wax, as set forth at column 1, lines 17-19. The Examiner has not indicated any specific text that shows whether Peralt Anstalt is made of resinous block copolymers or contains such anti-block agents, as described in Boultinghouse. If Peralt Anstalt is not made of resinous block copolymers, or does not contain anti-block agents, then there would be no motivation to combine the teachings of the two references,

when one is specifically concerned with the problems of anti-block agents, such as a microcrystalline wax.

With respect to the Examiner's argument that the welding solvent of Peralt Anstalt can be replaced with the welding composition of Boultinghouse, the Examiner's point is not completely clear. The Examiner still has not pointed out any specific text that shows whether Peralt Anstalt is made of resinous block copolymers or contains such anti-block agents as described in Boultinghouse. As stated earlier, absent such a showing, there would be no motivation to combine the teachings of the two references, when one is specifically concerned with the problems of anti-block agents, such as a microcrystalline wax. Therefore, there would be no motivation to substitute (or to mix, for that matter) the welding solvent of Peralt Anstalt with the welding composition of Boultinghouse. As such, for the reasons set forth above, claims 22, 23, and 27 are patentable. Moreover, claims 22, 23, and 27 are dependent directly on claim 1. Therefore, the reasons set forth above with respect to the patentability of claim 1 would also apply to these claims. Accordingly, the rejection under 35 U.S.C. §103 over Peralt Anstalt in view of Boultinghouse should be withdrawn.

At page 2 of the Office Action, the Examiner rejects claims 31 and 32 under 35 U.S.C. § 103(a) as being unpatentable over Peralt Anstalt in view of Brown (U.S. Patent No. 5,205,091). More specifically, the Examiner states that Peralt Anstalt shows a surface covering having two or more polymeric planks with edges, wherein the bonding agent is present on at least one of the edges of at least one of the planks, and wherein the bonding agent includes at least one solvent capable of at least bonding the edges of the planks. The Examiner admits that Peralt Anstalt fails to show that the surface covering is a floor. The Examiner states that Brown shows a floor surface covering

having two or more polymeric planks with edges, wherein the bonding agent is present on at least one of the edges of at least one of the planks, and wherein the bonding agent includes at least one solvent capable of bonding the edges of the planks for the purpose of obtaining a resilient system of flexible joints to join tiles together.

The Examiner then concludes that it would have been obvious to have provided a floor surface covering having two or more polymeric planks with edges, wherein the bonding agent is present on at least one of the edges of at least one of the planks, and wherein the bonding agent includes at least one solvent capable of at least bonding the edges of the planks for the purpose of obtaining a resilient system of flexible joints utilized to join tiles together. For the following reasons, this rejection is respectfully traversed.

First, Peralt Anstalt does not show edge-to-edge joining of the polymeric sheets. Peralt Anstalt is directed to the sorts of exterior panels that are used in roofing applications, and the term "overlapping" appears in the text (page 1, lines 16-19) and in the claims. Such a configuration would be typified by the overlapping of shingles on a roof, or clapboard on a house, and this configuration is confirmed by reference to the Figures. Such an overlapping configuration would be essential to ensure a watertight seal in outdoor applications, such as the roofs mentioned in the specification. The joining in an overlapping configuration of Peralt Anstalt would be of minimal value for a floor, since the end result would be an uneven surface. Therefore, no combination using Peralt Anstalt as a starting point could generate the claimed invention.

Second, Brown does not seem to show a conventional flooring system with polymeric planks. Brown is a specialized invention of considerable complexity, as may be appreciated by reference to its 249 figures, 179 columns of text, and 135 claims. To summarize this invention as

much as possible, Brown refers to a flooring, ceiling, or wall partition system having an array of modular units disposed over a conductor accommodating supporting layer disposed over a base surface, as set forth in the abstract. There are two sets of modular units, and the supporting layer allows the free passage of conductors between adjoining and opposing horizontal and vertical elements, allowing devices located in the horizontal and vertical elements to freely communicate with one another, as further described in the abstract.

However, the passages identified by the Examiner do not seem to refer to polymeric planks used for a flooring system, as in the claimed invention. One of the passages (column 9, lines 67-98 and column 10, lines 1-10) refers to the adhesives used to connect conventional tiles. A description of the tiles used immediately precedes the passages identified by the Examiner. This description (at column 9, lines 22-66) does not refer to polymeric planks; instead, the description appears to exclusively concern conventional tiles, such as ceramic tiles. The other passage identified by the Examiner as important (column 7, lines 47-48), refers to the damping effect of the cushioning layer, as well as the "flexible joints" used to hold the tile together. The exact relation of this text to the claimed invention is not completely clear. It should be noted that the types of adhesives mentioned (at column 9, lines 67-98 and column 10, lines 1-10) appear to be conventional adhesives that remain flexible even when cured. However, the solvents used in the present invention are quite different from the adhesives of Brown, and are probably better characterized as welding agents, in that they weld the polymeric planks together by virtue of being able to partially dissolve the materials of the plank. Such solvents are obviously not the same as the elastomeric adhesives mentioned in Brown, and would clearly also produce a very different type of joint than shown in Brown. As such, for the reasons set forth above, the rejection under 35 U.S.C. §103(a) over Peral

Request for Reconsideration
U.S. Patent Application No. 09/736,820

Anstalt in view of Brown should be withdrawn.

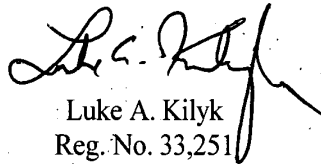
If there are any questions, the Examiner is encouraged to contact the undersigned by telephone.

CONCLUSION

In view of the following remarks, the applicants respectfully request consideration of this application and the timely allowance of the pending claims.

If there are any other fees due in connection with the filing of this response, please charge the fees to Deposit Account No. 50-0925. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,


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